

CLAIMS

- 5 1. A secure communication system comprising:
a first network having a first security controller
and a plurality of first network elements connected to
said first security controller;
a second network having a second security
10 controller and a plurality of second network elements
connected to said second security controller;
a user requesting secure multimedia services in
the second network, said first network being the user's
home network;
15 said first security controller selecting one of
the plurality of first network elements for coupling to
the second network; and said second security controller
selecting one of the plurality of second network
elements for dynamically coupling to the selected one
20 of the plurality of first network elements.
2. The secure communication system as claimed in
claim 1, wherein said dynamic coupling between said
selected ones of the first and second pluralities of
25 network elements is over an Internet Protocol
connection.
3. The secure communication system as claimed in
claim 1, wherein said first and second security
30 controllers pre-negotiate an internet protocol security
for the selected ones of the pluralities of first and
second network elements.
4. The secure communication system as claimed in
35 claim 1, wherein the first security controller

establishes a security association for said plurality of first network elements with a plurality of networks.

5 5. The secure communication system as claimed in claim 1, wherein the second security controller establishes a security association of the plurality of second network elements with a plurality of networks.

10 6. The secure communication system as claimed in claim 1, wherein the plurality of first network elements includes a plurality of call state control function units.

15 7. The secure communication system as claimed in claim 1, wherein the plurality of second network elements includes a plurality of call state control function units.

20 8. The secure communication system as claimed in claim 1, wherein the secure communication system is a 3GPP multimedia communication system.

25 9. The secure communication system as claimed in claim 1, wherein the secure communication system is a UMTS (Universal Mobile Telecommunication System).

30 10. A method for secure communication in a communication system, the communication system including home and visited networks having respective pluralities of first and second network elements and a first and second security controller, the method for secure communication comprising the steps of:
 assigning a user to the home network;
 requesting by the user secure multimedia services
35 from the visited network;

selecting by the visited network one of said plurality of second network elements;

selecting by the home network one of the plurality of first network elements in response to the step of
5 requesting by the user; and

dynamically coupling the selected ones of the pluralities of first and second network elements to provide secure multimedia services to the user.

10 11. The method for secure communication as claimed in claim 10, wherein there is further included prior to the step of requesting, negotiating a security association between the selected ones of the pluralities of first and second selected network
15 elements.

12. The method for secure communication as claimed in claim 10, wherein there is further included prior to the step of requesting, negotiating by the home network
20 security associations between each of the plurality of first network elements and a plurality of visited networks, each of the plurality of visited networks having a plurality of second network elements.

25 13. The method for secure communication as claimed in claim 12, wherein there is further included the step of pooling by the home network each of said plurality of first network elements having a negotiated security association.

30 14. The method for secure communication as claimed in claim 12, wherein there is further included the step of pooling by each of the plurality of visited networks the plurality of second network elements having a
35 security association.

15. The method for secure communication as claimed in claim 10, wherein the step of dynamically coupling the pluralities of first and second network elements includes the step of dynamically coupling over an internet protocol connection.

16. The method for secure communication as claimed in claim 11, wherein the step of dynamically coupling includes the steps of:

10 selecting by the home network a first network element having a security association with the visited network;

selecting by the visited network a second network element having a security association with the home network; and

15 coupling the selected ones of the pluralities of first and second network elements.

17. The method for secure communication as claimed in claim 10, wherein there is further included the step of providing a call state control function unit for each of said plurality of first network elements.

18. The method for secure communication as claimed in claim 10, wherein there is further included the step of providing a call state control function unit for each of the plurality of second network elements.

19. The method for secure communication as claimed in claim 10, wherein the communication system comprises a secure 3GPP multimedia communication system.

20. The method for secure communication as claimed in claim 10, wherein the communication system comprises a secure universal mobile telecommunication system.